

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

[1] (Currently amended) A metal nanocolloidal liquid characterized by containing a dispersion medium and nanocolloidal metal particles, and containing substantially no protective colloid-forming agent, wherein the liquid has a nanocolloidal metal particle concentration of 250 mass ppm or more, and wherein the protective colloid-forming agent content as reduced to carbon is equivalent to a total carbon of 0 to 200 mass ppm with respect to the nanocolloidal metal particles.

[2] and [3] (Cancelled).

[4] (Previously presented) A metal nanocolloidal liquid as described in claim 1, wherein the nanocolloidal metal particles have a mean particle size of 1 to 20 nm.

[5] (Previously presented) A metal nanocolloidal liquid as described in claim 1, wherein the nanocolloidal metal particles are nanocolloidal particles of at least one noble metal selected from the group consisting of platinum, ruthenium, palladium, rhodium, rhenium, osmium, and gold.

[6] (Previously presented) A metal nanocolloidal liquid as described in claim 1, wherein the dispersion medium is an aqueous medium.

[7] (Previously presented) A method for producing a metal-on-carrier, characterized by comprising causing nanocolloidal metal particles to be carried on a carrier by use of a metal nanocolloidal liquid as recited in claim 1.

[8] (Original) A method for producing a metal-on-carrier as described in claim 7, wherein the carrier is an electrically conductive carrier, and the nanocolloidal metal particles are caused to be carried on the carrier through electrodeposition.

[9] (Original) A method for producing a metal-on-carrier as described in claim 8, wherein the metal nanocolloidal liquid contains a reducing agent in a molecule-based amount 0.03 to 0.25 times by mole the atom-based amount of the metal(s) constituting the nanocolloidal metal particles, and the reducing agent has been employed during production of the nanocolloidal liquid.

[10] (Previously presented) A method for producing a metal-on-carrier as described in claim 8, wherein the electrically conductive carrier is a carrier formed of a carbon material, an electrically conductive metal oxide material, or a metallic material; or a carrier formed of a ceramic material, a non-electrically conductive metal oxide material, or an organic polymer material, and having an electrically conductive layer on the surface thereof.

[11] (Previously presented) A method for producing a metal-on-carrier as described in claim 8, wherein the electrically conductive carrier has been subjected to surface treatment in advance by use of the reducing agent which has been employed during production of the metal nanocolloidal liquid.

[12] (Original) A method for producing a metal-on-carrier as described in claim 7, wherein the dispersion medium is an aqueous medium, and the nanocolloidal metal particles are caused to be carried on the carrier through spraying.

[13] (Original) A method for producing a metal-on-carrier as described in claim 12, wherein the metal nanocolloidal liquid is concentrated in a vapor phase, and the nanocolloidal metal particles are caused to be carried on the carrier.

[14] (Previously presented) A method for producing a metal-on-carrier as described in claim 12, wherein the carrier is heated to 50 to 90°C, and the metal nanocolloidal liquid is sprayed onto the thus-heated carrier.

[15] (Previously presented) A method for producing a metal-on-carrier as described in claim 12, wherein the carrier is provided with a masking member on a surface thereof, and the metal nanocolloidal liquid is sprayed onto the carrier through the masking member.

[16] (Previously presented) A method for producing a metal-on-carrier as described in claim 12, wherein the carrier is formed of a carbon material, a ceramic/metal oxide material, a metallic material, or an organic polymer material.

[17] (Previously presented) A metal-on-carrier characterized by being produced through a production method as recited in claim 7.

[18] (New) A metal nanocolloidal liquid as described in claim 1, having a nanocolloidal metal particle concentration of 250 to 3000 mass ppm.

[19] (New) A method of producing a concentrated metal nanocolloidal liquid characterized by containing a dispersion medium and nanocolloidal metal particles, which has a nanocolloidal metal particle concentration of 250 mass ppm or more and containing substantially no protective colloid-forming agent, wherein the protective colloid-forming agent content as reduced to carbon is equivalent to a total carbon of 0 to 200 mass ppm with respect to the nanocolloidal metal particles, comprising:

adding to an aqueous metal salt solution, a reducing agent solution to react therewith;

causing the resultant reaction mixture to pass through a column filled with an ion-exchange resin to prepare a dilute metal nanocolloidal liquid; and

concentrating the dilute metal nanocolloidal liquid through thermal treatment under non-boiling conditions for evaporation of the dispersion medium contained in the nanocolloidal liquid.